METHOD FOR ACQUIRING AND ANALYSING A SCENE BY IMAGE DIFFERENCE
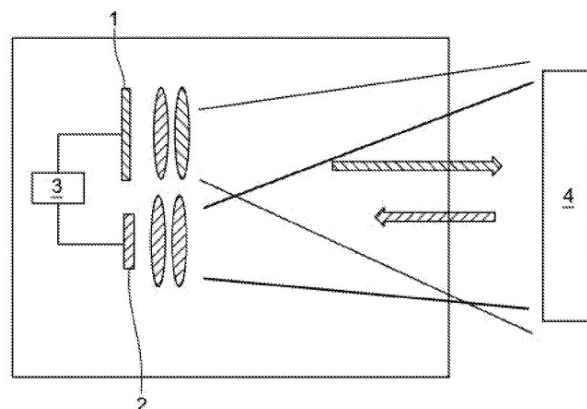
Technological advantages

- Efficient imaging acquisition system especially for relative motions between the scene & sensor
- Improvement in the useful signal quality

Invention synthesis

The invention deals with an acquisition set-up and imagery analysis.

A sensor takes a snapshot for a scene at a first moment with an ambient lighting (reflected or diffused light), several images may be acquired which are subsequently integrated into one. An excitation source (ultraviolet, infrared, visible or with filtering / polarizing elements) illuminates the scene (for example with a flash) and the sensor acquires at a second moment one (or several images integrated into one) image. A readjustment (compensating for the offset) is carried out for the scene (for example with pixel difference minimization) between the first and second moments.

A differential image is computed between the two (integrated) images allowing for a reduction in the noise coming from the ambient lighting. Denoising can be applied with digital image processing based on similarities between neighboring pixels.

Potential applications

- Imaging technologies

Exploded schematic view for the set-up

(1) Excitation source
(2) Sensor
(3) Central unit
(4) Scene to be analyzed

Commercial benefits

- Efficient shooting system with little sensitivity to the ambient lightning

Patented invention - under license.

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For more information :

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